

Appendix A
Airport Zoning

SUB-ANALYSIS

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CHAPTER 5

AIRPORT ZONING

SECTION 5.01. PURPOSE AND AUTHORITY. The Dodge Center Airport Zoning Board, created and established by action of the Council pursuant to the provisions and authority of Minnesota Statutes 360.063, hereby finds and declares that:

Subd. 1. An airport hazard endangers the lives and property of users of the Dodge Center Airport, and property or occupants of land in its vicinity, and also if of the obstructive type, in effect reduces the size of the area available for the landing, takeoff, and maneuvering of aircraft, thus tending to destroy or impair the utility of the Dodge Center Airport and the public investment therein.

Subd. 2. The creation or establishment of an airport hazard is a public nuisance and an injury to the region served by the Dodge Center Airport.

Subd. 3. For the protection of the public health, safety, order, convenience, prosperity and general welfare, and for the promotion of the most appropriate use of land, it is necessary to prevent the creation or establishment of airport hazards.

Subd. 4. The prevention of these airport hazards should be accomplished, to the extent legally possible, by the exercise of the police power without compensation.

Subd. 5. The prevention of the creation or establishment of airport hazards and the elimination, removal, alteration, mitigation, or marking and lighting of existing airport hazards are public purposes for which political subdivisions may raise and expend public funds.

SEC. 5.02. LAND AFFECTED. Those sections of land affected by this Chapter are indicated on "Exhibit A" following this Chapter.

SEC. 5.03. DEFINITIONS. The following terms, as used in this Chapter, shall have the meanings stated:

1. **"Airport"** means the Dodge Center Airport located in Section 2 of Ashland Township and Section 35 of Wasioja Township, Dodge County, Minnesota.

2. **"Airport Elevation"** means the established elevation of the highest point on the usable landing area which elevation is established to be 1305 feet above mean sea level.

3. **"Airport Hazard"** means any structure or tree or use of land which obstructs the airspace required for, or is otherwise hazardous to, the flight of aircraft in landing or taking off at the airport; and any use of land which is hazardous to persons or property because of its proximity to the airport.

4. **"Dwelling"** means any building or portion thereof designed or used as a residence or sleeping place of one or more persons.

5. **"Height"** for the purpose of determining the height limits in all zones set forth in this Chapter and shown on the zoning map, the datum shall be mean sea level elevation unless otherwise specified.

6. **"Landing Area"** means the area of the airport used for the landing, taking off or taxiing of aircraft.

7. **"Nonconforming Use"** means any pre-existing structure, tree, natural growth, or use of land which is inconsistent with the provisions of this Chapter or an amendment hereto.

8. **"Nonprecision Instrument Runway"** means a runway having an existing or planned straight-in instrument approach procedure utilizing air navigation facilities with only horizontal guidance, and for which no precision approach facilities are planned or indicated on an approved planning document.

9. **"Planned"** as used in this Chapter refers only to those proposed future airport developments that are so indicated on a planning document having the approval of the Federal Aviation Administration, the Minnesota Department of Aeronautics, and the City.

10. **"Runway"** means any existing or planned paved surface or turf covered area of the airport which is specifically designated and used or planned to be used for the landing and/or taking off of aircraft.

11. **"Slope"** means an incline from the horizontal expressed in an arithmetic ratio of horizontal magnitude to vertical magnitude.

40 slope = 40:1 = 40 ft. horizontal
to 1 ft. vertical

12. **"Structure"** means an object constructed or installed by man, including, but without limitation, buildings, towers, smokestacks, and overhead transmission lines.

13. **"Traverse Ways"** for the purpose of determining height limits as set forth in this Chapter shall be increased in height by 17 feet for interstate highways; 15 feet for all other public roadways; 10 feet or the height of the highest mobile object that would normally traverse the road, whichever is greater, for private roads; 23 feet for railroads; and for waterways and all other traverse ways not previously mentioned, an amount equal to the height of the highest mobile object that would normally traverse it.

14. **"Tree"** means any object of natural growth.

15. **"Utility Runway"** means a runway that is constructed for and intended to be used by propeller-driven aircraft of 12,500 pounds maximum gross weight and less.

16. **"Visual Runway"** means a runway intended solely for the operation of aircraft using visual approach procedures, with no straight-in instrument approach procedure and no instrument designation indicated on an approved planning document.

17. **"Water Surfaces"** for the purpose of this Chapter shall have the same meaning as land for the establishment of protected zones.

Source: Ordinance No. 13, 2nd Series
Effective Date: 6-23-93

(Sections 5.04 through 5.09, inclusive, reserved for future expansion.)

SEC. 5.10. AIRSPACE OBSTRUCTION ZONING.

Subd. 1. Airspace Zones. In order to carry out the purpose of this Chapter, as set forth above, the following airspace zones are hereby established: Primary Zone, Horizontal Zone, Conical Zone, Approach Zone, and Transitional Zone and whose locations and dimensions are as follows:

A. Primary Zone: All that land which lies directly under an imaginary primary surface longitudinally centered on a runway and:

1. extending 200 feet beyond each end of Runway 16/34.
2. extending 200 feet beyond each end of Runway 06/24.

The elevation of any point on the primary surface is the same as the elevation of the nearest point on the runway centerline. The width of the primary surface is:

1. 500 feet for Runway 16/34.
2. 500 feet for Runway 06/24.

B. Horizontal Zone: All that land which lies directly under an imaginary horizontal surface 150 feet above the established airport elevation, or a height of 1455 feet above mean sea level, the perimeter of which is constructed by swinging arcs of specified radii from the center of each end of the primary surface of each runway and connecting the adjacent arcs by lines tangent to those arcs. The radius of each arc is:

1. 10,000 feet for Runway 16/34.
2. 6,000 feet for Runway 06/24.

When a 6,000 foot arc is encompassed by tangents connecting two adjacent 10,000 foot arcs, the 6,000 foot arc shall be disregarded in the construction of the perimeter of the horizontal surface.

C. Conical Zone: All that land which lies directly under an imaginary conical surface extending upward and outward from the periphery of the horizontal surface at a slope of 20 to 1 for a horizontal distance of 4,000 feet as measured radially outward from the periphery of the horizontal surface.

D. Approach Zone: All that land which lies directly under an imaginary approach surface longitudinally centered on the extended centerline at each end of a runway. The inner edge of the approach surface is at the same width and elevation as, and coincides with, the end of the primary surface. The approach surface inclines upward and outward for a distance of 10,000 feet at the following slopes and outer widths, then continuing at the same rate of divergence to the periphery of the Conical Surface.

1. 40:1 slope and 3500 feet outer width for Runway 16/34
2. 40:1 slope and 2500 feet outer width for Runway 06/24.

E. Transitional Zone: All that land which lies directly under an imaginary surface extending upward and outward at right angles to the runway centerline and centerline extended at a slope of 7 to 1 from the sides of the primary surfaces and from the sides of the approach surfaces until they intersect the horizontal surface or the conical surface.

Subd. 2. Height Restrictions. Except as otherwise provided in this Chapter, and except as necessary and incidental to airport operations, no structure or tree shall be constructed, altered, maintained, or allowed to grow in any airspace zone created in this Section so as to project above any of the imaginary airspace surfaces described in Subd. 1, above. Where an area is covered by more than one height limitation, the more restrictive limitations shall prevail.

Subd. 3. Boundary Limitations. The City may regulate the location, size and use of buildings and the density of population in that portion of an airport hazard area under the approach zones for distance not exceeding two miles from the airport boundary and by height restriction zoning for a distance not to exceed one and one-half miles from the airport boundary.

SEC. 5.11. LAND USE SAFETY ZONING.

Subd. 1. Safety Zone Boundaries. In order to carry out the purpose of this Chapter and in order to restrict those uses which may be hazardous to the operational safety of aircraft operating to and from the Dodge Center Airport, and to limit population and building density in the runway approach areas thereby creating sufficient open space so as to protect life and property in case of an accident, there are hereby created and established the following land use safety zones:

A. Safety Zone A: All land in that portion of the approach zones of a runway which extends outward from the end of primary surface a distance equal to two-thirds of the planned length of the runway, which distance shall be:

1. 3000 feet for Runway 16/34.
2. 2400 feet for Runway 06/24.

B. Safety Zone B: All land in that portion of the approach zones of a runway which extends outward from Safety Zone A a distance equal to one-third of the planned length of the runway, which distance shall be:

1. 1500 feet for Runway 16/34.
2. 1200 feet for Runway 06/24.

C. Safety Zone C: All that land which is enclosed within the perimeter of the horizontal zone and which is not included in Zone A or Zone B.

Subd. 2. Use Restrictions.

A. General. Subject at all times to the height restrictions set forth herein, no use shall be made of any land in any of the safety zones which creates or causes interference with the operation of radio or electronic facilities on the airport or with radio or electronic communications between airport and aircraft, makes it difficult for pilots to distinguish between airport lights and other lights, resulting in glare in the eyes of pilots using the airport, impairs visibility in the vicinity of the airport, or otherwise endangers the landing, taking off, or maneuvering of aircraft.

B. Zone A. Subject at all times to the height restrictions set forth herein and to the general restrictions contained in this Subdivision, areas designated as Zone A shall contain no buildings, temporary structures, exposed transmission lines, or other similar above-ground land use structural hazards, and shall be restricted to those uses which will not create, attract, or bring together an assembly of persons thereon. Permitted uses may include, but are not limited to, such uses as agriculture (seasonal crops), horticulture, animal husbandry, raising of livestock, wildlife habitat, light outdoor recreation (nonspectator), cemeteries, and auto parking.

C. Zone B. Subject at all times to the height restrictions set forth herein and to the general restrictions contained in this Subdivision, areas designated as Zone B shall be restricted in use as follows:

1. Each use shall be on a site whose area shall not be less than three acres.
2. Each use shall not create, attract, or bring together a site population that would exceed 15 times that of the site acreage.
3. Each site shall have no more than one building plot upon which any number of structures may be erected.
4. A building plot shall be a single, uniform and non-contrived area, whose shape is uncomplicated and whose area shall not exceed the following minimum ratios with respect to the total site area:

| Site Area at Least (Acres) | But Less Than (Acres) | Ratio of Site Area to Bldg. Plot Area | Building Plot Area (Sq.Ft.) | Max. Site Population (15 persons/A) |
|----------------------------------|-----------------------------|---|-----------------------------------|---|
| 3 | 4 | 12:1 | 10,900 | 45 |
| 4 | 6 | 10:1 | 17,400 | 60 |
| 6 | 10 | 8:1 | 32,600 | 90 |
| 10 | 20 | 6:1 | 72,600 | 150 |
| 20 | and up | 4:1 | 218,000 | 300 |

5. The following uses are specifically prohibited in Zone B: Churches, hospitals, schools, theaters, stadiums, hotels and motels, trailer courts, camp grounds, and other places of frequent public or semipublic assembly.

D. **Zone C.** Zone C is subject only to height restrictions set forth herein and to the general restrictions contained in this Subdivision.

Subd. 3. Boundary Limitations. The City may regulate the location, size and hazard area under the approach zones for a distance not to exceed two miles from the airport boundary and in other portions of an airport hazard area not to exceed one mile from the airport boundary.

SEC. 5.12. AIRPORT ZONING MAP. The zones herein established as shown on the Dodge Center Airport Zoning Map prepared by Wallace Holland Kastler Schmitz & Company and dated September 23, 1992, follow this Chapter, marked EXHIBIT A, and made a part hereof, which Map, together with such amendments thereto as may from time to time be made, and all notations, references, elevations, data, zone boundaries, and other information thereon, is hereby adopted as part of this Chapter.

SEC. 5.13. NONCONFORMING USES. The regulations prescribed by this Chapter are not retroactive and shall not be construed to require the removal, lowering, or other changes or alteration of any structure or tree not conforming to the regulations as of the effective date of this Chapter, or otherwise interfere with the continuance of any nonconforming use. Nothing herein contained shall require any change in the construction, alteration, or intended use of any structure, the construction or alteration of which was begun prior to the effective date of this Chapter, and is diligently prosecuted and completed within two years thereof.

SEC. 5.14. PERMITS.

Subd. 1. Future Uses. Except as specifically provided in this Subdivision, no material change shall be made in the use of land and no structure shall be erected, altered, or otherwise established in any zone hereby created unless a permit therefor shall have been

applied for and granted by the Zoning Administrator. Each application for a permit shall indicate the purpose for which the permit is desired, with sufficient particularity to permit it to conform to the regulations herein prescribed. If such determination is in the affirmative, the permit shall be granted.

A. A permit for a tree or structure of less than 75 feet of vertical height above the ground shall not be required in the horizontal and conical zones or in any approach and transitional zones beyond a horizontal distance of 4,500 feet from each end of the runway except when such tree or structure, because of terrain, land contour, or topographic features, would extend the height limit prescribed for the respective zone.

B. Nothing contained in Subparagraph A, above, shall be construed as permitting or intending to permit any construction, alteration, or growth of any structure or tree in excess of any of the height limitations established by this Chapter.

Subd. 2. Existing Uses. Before any existing use or structure may be replaced, substantially altered or repaired, or rebuilt within any zone established herein, a permit must be secured authorizing such replacement, change, or repair. No permit shall be granted that would allow the establishment or creation of any airport hazard or permit a nonconforming use, structure, or tree to become a greater hazard to air navigation than it was on the effective date of this Chapter, or any amendments thereto, or than it is when the application for a permit is made. Except as indicated, all applications for such permit shall be granted.

Subd. 3. Nonconforming Uses Abandoned or Destroyed. Whenever the Zoning Administrator determines that a nonconforming structure or tree has been abandoned or more than 50% torn down, physically deteriorated, or decayed, no permit shall be granted that would allow such structure or tree to exceed the applicable height limit or otherwise deviate from the zoning regulations. Whether application is made for a permit under this Subdivision or not, the Zoning Administrator may order the owner of the abandoned or partially destroyed nonconforming structure, at his own expense, to lower, remove, reconstruct, or equip the same in the manner necessary to conform to the provisions of this Chapter. In the event the owner of the nonconforming structure shall neglect or refuse to comply with such order for ten days after receipt of written notice of such order, the Zoning Administrator may, by appropriate legal action, proceed to have the abandoned or partially destroyed nonconforming structure lowered, removed, reconstructed, or equipped and assess the cost and expense thereof against the land on which the structure is or was located. Unless such an assessment is paid within ninety days from the service of notice thereof on the owner of the land, the sum shall bear interest at the rate of eight percent per annum from the date the cost and expense is incurred until paid, and shall be collected in the same manner as are general taxes.

SEC. 5.15. VARIANCES. Any person desiring to erect or increase the height of any structure, or permit the growth of any tree, or use his property not in accordance with the regulations prescribed in this Chapter may apply to the Airport Board of Adjustment, hereinafter provided for, for a variance from such regulations. If a person submits an application for a variance by certified mail to the members of the Board and the Board fails to grant or deny the variance within four months after the last member receives the application, the variance shall be deemed to be granted by the Board.

When the variance is granted by reason of the failure of the Board to act on the variance, the person receiving the variance shall notify the Board and the Commissioner of Transportation by certified mail that the variance has been granted. The applicant shall include a copy of the original application for the variance with this notice to the Commissioner. The variance shall be effective 60 days after this notice is received by the Commissioner subject to any action taken by the Commissioner pursuant to Section 360.063, Subdivision 6.

Such variances shall be allowed where it is duly found that a literal application or enforcement of the regulations would result in practical difficulty or unnecessary hardship and relief granted would not be contrary to the public interest but do substantial justice and be in accordance with the spirit of this Chapter provided any variance so allowed may be subject to any reasonable conditions that the Airport Board of Adjustment or Commissioner may deem necessary to effectuate the purpose of this Chapter.

SEC. 5.16. HAZARD MARKING AND LIGHTING.

Subd. 1. Nonconforming Uses. The owner of any nonconforming structure or tree is hereby required to permit the installation, operation, and maintenance thereon of such markers and lights as shall be deemed necessary by the Zoning Administrator to indicate to the operators of aircraft in the vicinity of the airport the presence of such airport hazards. Such markers and lights shall be installed, operated, and maintained at the expense of the City.

Subd. 2. Permits and Variances. Any permit or variance granted by the Zoning Administrator or Airport Board of Adjustment as the case may be, may, if such action is deemed advisable to effectuate the purpose of this Chapter and be reasonable in the circumstances, so condition such permit or variance as to require the owner of the structure or tree in question at his own expense, to install, operate, and maintain thereon such markers and lights as may be necessary to indicate to pilots the presence of an airport hazard.

Source: Ordinance No. 13, 2nd Series
Effective Date: 6-23-93

(Sections 5.17 through 5.19, inclusive, reserved for future expansion.)

SEC. 5.20. AIRPORT ZONING ADMINISTRATOR. The Zoning Administrator shall administer and enforce the regulations prescribed herein. Applications for permits and variances shall be made to the Zoning Administrator upon a form furnished by the Administrator. Permit applications shall be promptly considered and granted or denied. Variance applications shall be forthwith transmitted by the Zoning Administrator for action by the Airport Board of Adjustment hereinafter provided for.

SEC. 5.21. AIRPORT BOARD OF ADJUSTMENT.

Subd. 1. Establishment. The Airport Board of Adjustment shall consist of five members appointed by the Dodge Center Airport Zoning Board, and each shall serve for a term of three years and until his successor is duly appointed and qualified. Of the members first appointed, one shall be appointed for a term of one year, two for a term of two years, and two for a term of three years. Upon their appointment the members shall select a Chairman to act at the pleasure of the Board. Members shall be removable by the Airport Zoning Board for cause, upon written charges, after a public hearing.

Subd. 2. Powers. The Airport Board of Adjustment shall have and exercise the following powers:

- A. To hear and decide appeals from any order, requirement, decision, or determination made by the Zoning Administrator in the enforcement of this Chapter.
- B. To hear and decide special exceptions to the terms of this Chapter upon which such Airport Board of Adjustment under such regulations may be required to pass.
- C. To hear and decide specific variances.

Subd. 3. Procedures.

A. The Airport Board of Adjustment shall adopt rules for its governance and procedure in harmony with the provisions of this Chapter. Meetings of the Airport Board of Adjustment shall be held at the call of the Chairman and at such other times as the Airport Board of Adjustment may determine. The Chairman, or in his absence, the Acting Chairman, may administer oaths and compel the attendance of witnesses. All hearings of the Airport Board of Adjustment shall be public. The Airport Board of Adjustment shall keep minutes of its proceedings showing the vote of each member upon each question or, if absent or failing to vote, indicating such fact, and shall keep records of its examinations and other official actions, all of which shall immediately be filed in the office of the Zoning Administrator and shall be a public record.

B. The Airport Board of Adjustment shall make written findings of fact and conclusions of law giving the facts upon which it acted and its legal conclusions from such facts in reversing, affirming, or modifying any order, requirement, decision or determination which comes before it under the provisions of this Chapter.

C. The concurring vote of a majority of the members of the Airport Board of Adjustment shall be sufficient to reverse any order, requirement, decision or determination of the Zoning Administrator or to decide in favor of the applicant on any matter upon which it is required to pass under this Chapter or to effect any variation in this Chapter.

SEC. 5.22. APPEALS.

A. Any person aggrieved, or any taxpayer affected by any decision of the Zoning Administrator made in the administration of this Chapter may appeal to the Airport Board of Adjustment. Such appeals may also be made by any governing body of a municipality, county, or airport zoning board, which is of the opinion that a decision of the Zoning Administrator is an improper application of this Chapter as it concerns such governing body or board.

B. All appeals hereunder must be commenced within 30 days of the Zoning Administrator's decision, by filing with the Zoning Administrator a notice of appeal specifying the grounds thereof. The Zoning Administrator shall forthwith transmit to the Airport Board of Adjustment all the papers constituting the record upon which the action appealed from was taken. In addition, any person aggrieved, or any taxpayer affected by any decisions of the Zoning Administrator made in his administration of this Chapter who desires to appeal such decision shall submit an application for a variance by certified mail to the members of the Airport Board of Adjustment in the matter set forth in Minnesota Statutes 360.067, Subdivision 2.

C. An appeal shall stay all proceedings in furtherance of the action appealed from, unless the Zoning Administrator certifies to the Airport Board of Adjustment, after the notice of appeal has been filed with it, that by reason of the facts stated in the certificate a stay would, in his opinion, cause imminent peril to life or property. In such case, proceedings shall not be stayed except by order of the Airport Board of Adjustment on notice to the Zoning Administrator and on due cause shown.

D. The Airport Board of Adjustment shall fix a reasonable time for hearing appeals, give public notice and due notice to the parties in interest, and decide the same within a reasonable time. Upon the hearing any party may appear in person or by agent or by attorney.

E. The Airport Board of Adjustment may, in conformity with the provisions of this Chapter, reverse or affirm, in whole or in part, or modify the order, requirement, decision or determination appealed from and may make such order, requirement, decision or determination, as may be appropriate under the circumstances, and to that end shall have all the powers of the Zoning Administrator.

SEC. 5.23. JUDICIAL REVIEW. Any person aggrieved, or any taxpayer affected by any decision of the Airport Board of Adjustment, or any governing body of a municipality, county, or airport zoning board, which is of the opinion that a decision of the Airport Board of Adjustment is illegal, may present to the District Court of Dodge County a verified petition setting forth that the decision is illegal, in whole or in part, and specifying the grounds of the illegality. Such petition shall be presented to the Court within 30 days after the decision is filed in the office of the Airport Board of Adjustment. The petitioner must exhaust the remedies provided in this Chapter before availing himself of the right to petition a Court as provided by this Section.

SEC. 5.24. UNLAWFUL ACTS. It is unlawful for any person to construct, establish, substantially change, alter or repair any existing structure or use, or permit the growth of any tree without having complied with the provisions of this Chapter or who, having been granted a permit or variance under the provisions of this Chapter, shall construct, establish, substantially change or substantially alter or repair any existing growth or structure or permit the growth of any tree, except as permitted by such permit or variance. The Zoning Administrator may enforce all provisions of this Chapter through such proceedings for injunctive relief and other relief as may be proper under the laws of Minnesota Statutes 360.073 and other applicable law.

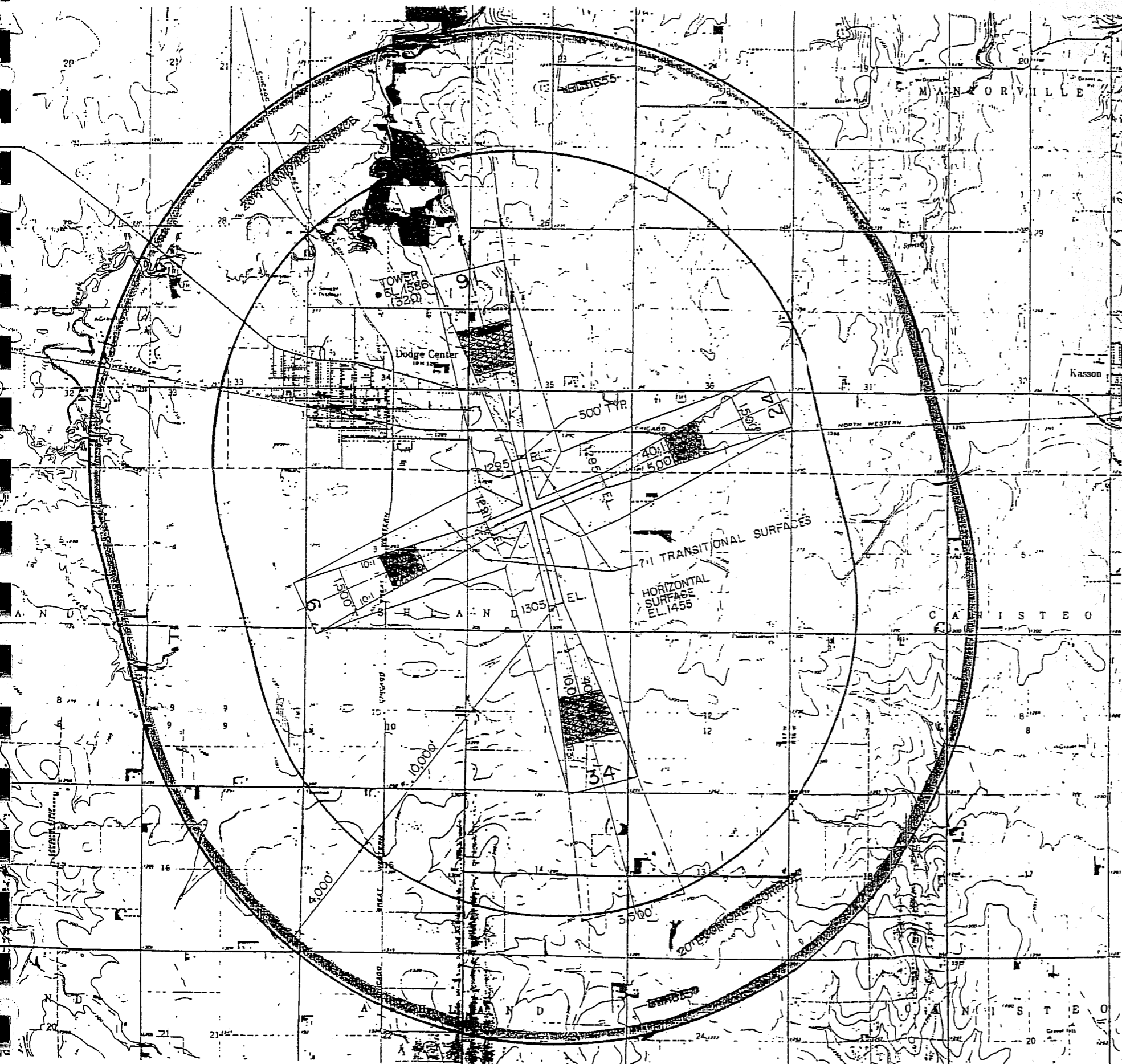
SEC. 5.25. CONFLICTS. Where there exists a conflict between any of the regulations or limitations prescribed in this Chapter and any other regulations applicable to the same area, whether the conflict be with respect to the height of structures or trees, the use of land, or any other matter, the more stringent limitation or regulation shall govern and prevail.

Source: Ordinance No. 13, 2nd Series
Effective Date: 6-23-93

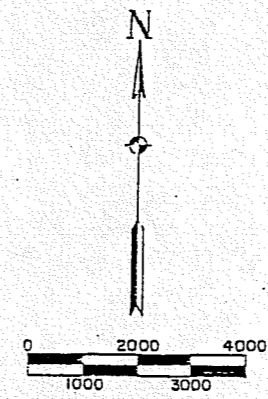
(Sections 5.26 through 5.98, inclusive, reserved for future expansion.)

SEC. 5.99. VIOLATION A MISDEMEANOR. Every person violates a section, subdivision, paragraph or provision of this Chapter when he performs an act thereby prohibited or declared unlawful, or fails to act when such failure is thereby prohibited or declared unlawful, and upon conviction thereof, shall be punished as for a misdemeanor except as otherwise stated in specific provisions hereof.

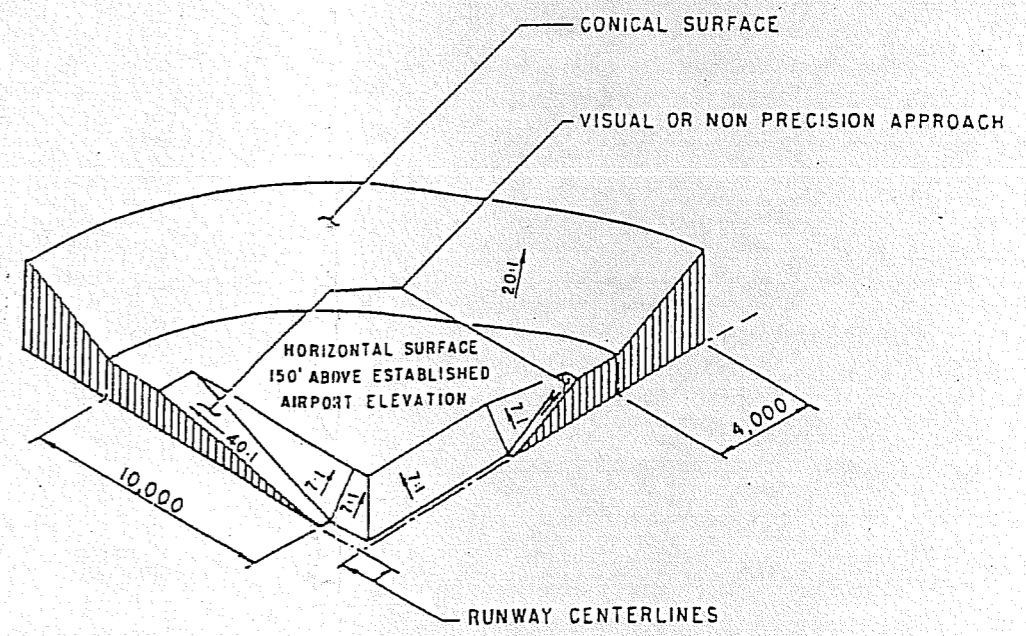
Source: Ordinance No. 13, 2nd Series
Effective Date: 6-23-93



DODGE CENTER MUNICIPAL AIRPORT DODGE CENTER, MINNESOTA



- LEGEND**
- SAFETY ZONE A
 - SAFETY ZONE B



ISOMETRIC VIEW
No Scale

Appendix B
Soil Sample Descriptions

Table B-1
Mapped Soil Units on the Site

| Soil Symbol | Soil Unit | Hydric Status | | Prime Farmland |
|-------------|---|---------------|-----------|---------------------|
| | | Component | Inclusion | |
| CsA | Clyde silty clay loam, 0-2% slopes | Yes | Yes | Yes - where drained |
| FtB | Floyd silty clay loam, 0-2% slopes | No | Yes | Yes |
| Fy | Floyd and Clyde silty clay loams | Yes | | Yes |
| KaA | Kasson silt loam, 0-2% slopes | No | Yes | Yes |
| KaB | Kasson silt loam, 2-6% slopes | No | Yes | Yes |
| Kc | Kato silty clay loam | Yes | Yes | Yes - where drained |
| KnA | Kenyon silt loam, 0-2% slopes | No | Yes | Yes |
| KnB | Kenyon silt loam, 2-6% slope | No | Yes | Yes |
| Mp | Mixed alluvial land, poorly drained | Yes | Yes | No |
| RaA | Racine silt loam, 0-2% slopes | No | Yes | Yes |
| RaB | Racine silt loam, 2-6% slopes | No | Yes | Yes |
| RaB2 | Racine silt loam, 2-6% slopes, moderately eroded | No | Yes | Yes |
| RaC2 | Racine silt loam, 6-12% slopes, moderately eroded | No | Yes | No ¹ |
| SkA | Skyberg silt loam, 0-2% slopes | No | Yes | Yes |
| TsC2 | Thurston loam, 6-12% slopes, moderately eroded | No | Yes | No |

1) This soil is considered a State-wide important soil as defined by the Minnesota NRCS.

Soil Series Descriptions

Clyde Series (CsA)

The Clyde series consists of deep, poorly and very poorly drained, moderately permeable soils. Clyde soils are formed on uplands in loamy glacial outwash or erosional sediments and the underlying loam glacial till. They are found on flat to concave upland drainageways. Slope gradients range from 0 to 3 percent.

Floyd Series (FtB, Fy)

The Floyd Series consists of deep, somewhat poorly drained, moderately permeable soils. These soils are formed on foot slopes of uplands and intermittent drainageways in 32 to 46 inches of loamy sediments and the underlying glacial till. Slopes range from 0 to 5 percent.

Kasson Series (KaA, KaB)

The Kasson series consists of deep moderately well drained soils with moderately slow permeability. These soils formed in a mantle of silty or loamy sediments and underlying loamy

glacial till on dissected ground moraines. Kasson soils are found on slightly convex simple slopes on the “Iowan Erosion Surface.” Their slopes range from 1 to 7 percent.

Kato (Kc)

The Kato series consists of poorly and very poorly drained soils. They have moderate permeability in the solum and rapid permeability in the 2C horizon. These soils formed in a 20 to 40 inch mantle of silty sediments over sandy or gravelly sandy glacial outwash sediments. These soils are on glacial outwash plains and valley trains. Slopes range from 0 to 2 percent.

Kenyon (KnA, KnB)

The Kenyon series consists of deep, moderately well and well-drained, moderately permeable soils. These soils formed on uplands in loamy sediments and the underlying glacial till. They are typically found on long, smooth, usually convex slopes in a landscape with a dendritic drainage system. Slope ranges from 1 to 25 percent.

Mixed alluvial land (Mp)

The Mixed alluvial land is poorly to very poorly drained soils. They are located on level, narrow bottomlands and in depressions in the wider areas of bottomland. These areas are frequently flooded.

Racine (RaA, RaB, RaB2, RaC2)

The Racine series consists of deep well and moderately well drained soils with moderate permeability. These soils formed in a 12 to 24 inch thick mantle of silty or loamy sediments and in underlying loamy glacial till on dissected glacial moraines. Racine soils are on convex or plane slopes on summits and shoulders on the “Iowan Erosion Surface.” They have slopes with a gradient of 0 to 25 percent.

Skyberg (SkA)

The Skyberg series consists of deep somewhat poorly drained soils with moderately slow or slow permeability. These soils formed in a mantle of loess and underlying firm calcareous loam glacial till on ground moraines. The Skyberg soils are found on plane to slightly convex simple slopes on the “Iowan Erosion Surface.” Their slopes are ½ to 2 percent.

Thurston (TsC2)

The Thurston series consists of moderately deep well drained soils. These soils formed glacial material overlying very coarse textured to coarse textured glacial till. Their slopes are 2 to 18 percent.

Appendix C
Agency Letters



MINNESOTA HISTORICAL SOCIETY

RECEIVED

MAY 14 2003

HDR Engineering, Inc.

May 12, 2003

Ms. Michelle Bissonnette
HDR Engineering
6190 Golden Hills Drive
Minneapolis, MN 55416-1567

Re: GW, LLC Wind Project
T106 R17 S9, 10, 15, 16, 22 & 27, Ashland Twp., Dodge County
SHPO Number: 2003-2108

Dear Ms. Bissonnette:

Thank you for contacting our office regarding the planning for the above referenced project.

1. We do not believe that an archaeological survey of the project area is necessary.
2. The Ashland Township Hall, located in Section 16, was included in our statewide inventory in 1980. No information is available on the other buildings/structures in the area, so we cannot determine the need for further survey/evaluation.

Contact us at 651-296-5462 with questions or concerns.

Sincerely,

Dennis A. Gimmestad
Government Programs & Compliance Officer

FROM THE DESK OF:

GARY J. WEGE
U.S. FISH & WILDLIFE SERVICE
TWIN CITIES FIELD OFFICE, 4101 E. 80TH STREET
BLOOMINGTON, MINNESOTA 55425-1665

COMM. 612/725-3548, ext. 207
FAX 612/725-3609
Gary_Wege@fws.gov

DATE: 5-1-03

PAGE: 1 of 1

PHONE: 763/591-5431

TO: Michelle Bissonnette, HDR, Mpls, MN

SUBJECT: GW, LLC Wind Project, Dodge County, MN

Dear Michelle:

This responds to your letter dated March 26, 2003, requesting information on federally threatened and endangered species for the above referenced project.

There are currently no federally endangered or threatened species known to occur at the specific locations identified in your letter and accompanying materials. Consequently, we have determined that the proposed project will not affect any federally listed or proposed threatened or endangered species or adversely modify their critical habitat. This precludes the need for further action on this project as required under Section 7 of the Endangered Species Act of 1973, as amended. However, if the project is modified or new information becomes available which indicates that listed species may occur in the affected area, consultation with this office should be reinitiated.

We appreciate the opportunity to comment and look forward to working with you in the future. If you have questions regarding our comments, please call me at (612) 725-3548, extension 207.

Gary J. Wege
Fish & Wildlife Biologist

FWS ID # 9232



Minnesota Department of Natural Resources

Natural Heritage and Nongame Research Program, Box 25

500 Lafayette Road

St. Paul, Minnesota 55155-4000

Phone: (651) 296-7863

Fax: (651) 296-1811

E-mail: sarah.hoffmann@dnr.state.mn.us

RECEIVED

MAY - 7 2003

HDR Engineering, Inc.

May 2, 2003

Michelle Bissonnette
HDR Engineering
6190 Golden Hills Drive
Minneapolis, MN 55416-1518

Re: Request for Natural Heritage information for vicinity of proposed GW, LLC Wind Turbine Project,
T106N R17W Sections 9, 10, 15, 16, 22 & 27, Dodge County
NHNRP Contact #: ERDB 20030905

Dear Ms. Bissonnette,

The Minnesota Natural Heritage database has been reviewed to determine if any rare plant or animal species or other significant natural features are known to occur within an approximate one-mile radius of the area indicated on the map enclosed with your information request. Based on this review, there are 4 known occurrences of rare species in the area searched (for details, see enclosed database printout and explanation of selected fields). Following are specific comments for those elements.

- Several areas containing native prairie remnants have been identified in the general project area and two rare prairie plants, Sullivan's Milkweed (*Asclepias sullivantii*), a Threatened species, and Rattlesnake-Master (*Eryngium yuccifolium*), a Special Concern species, have been documented in along road and railroad rights-of-way within the immediate vicinity of the project area. Given that more than 99% of the prairie that was present in the state before settlement has been destroyed, and more than one-third of Minnesota's endangered, threatened, and special concern species are now dependent on the remaining small fragments of Minnesota's prairie ecosystem, we feel that all prairie remnants merit protection. Because Dodge County has not yet been surveyed by the Minnesota County Biological Survey Program, there may be additional native prairie remnants near or within the project area that have not been previously identified. We recommend that the project area be surveyed by a qualified botanist or plant ecologist to determine if any remnant prairie and/or protected plant species exist on the project site. If prairie communities are present, we recommend that alternatives be sought which would avoid impacts to this rare community type. Please provide us with copies of any survey reports/prairie management plans that are prepared for this site.
- Wind farms have been associated with bird and bat mortalities as a result of collisions with turbines. As such, turbines should not be sited near areas with large concentrations of birds or within known migration corridors. To this end, an assessment of avian and bat use of the project site should be conducted, if it hasn't been done already, to determine the potential for avian and bat mortality at the project site. Please provide us with copies of any survey reports/assessments prepared for this site.

DNR Information: 651-296-6157 • 1-888-646-6367 • TTY: 651-296-5484 • 1-800-657-3929

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The Natural Heritage database is maintained by the Natural Heritage and Nongame Research Program, a unit within the Division of Ecological Services, Department of Natural Resources. It is continually updated as new information becomes available, and is the most complete source of data on Minnesota's rare or otherwise significant species, natural communities, and other natural features. Its purpose is to foster better understanding and protection of these features.

Because our information is not based on a comprehensive inventory, there may be rare or otherwise significant natural features in the state that are not represented in the database. A county-by-county survey of rare natural features is now underway, but has not been completed for Dodge County. Therefore ecologically significant features for which we have no records may exist on the project area.

The enclosed results of the database search are provided in two formats: index and full record. To control the release of locational information which might result in the damage or destruction of a rare element, both printout formats are copyrighted.

The index provides rare feature locations only to the nearest section, and may be reprinted, unaltered, in an Environmental Assessment Worksheet, municipal natural resource plan, or report compiled by your company for the project listed above. If you wish to reproduce the index for any other purpose, please contact me to request written permission. Copyright notice for the index should include the following disclaimer:

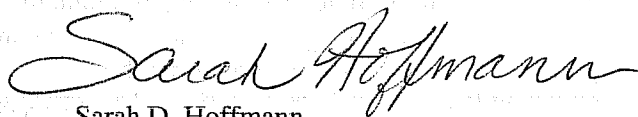
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The full-record printout includes more detailed locational information, and is for your personal use only. If you wish to reprint the full-record printouts for any purpose, please contact me to request written permission.

Please be aware that review by the Natural Heritage and Nongame Research Program focuses only on *rare natural features*. It does not constitute review or approval by the Department of Natural Resources as a whole. If you require further information on the environmental review process for other wildlife-related issues, you may contact your Regional Environmental Assessment Ecologist, Shannon Fisher, at (507) 359-6073.

An invoice for the work completed is enclosed. You are being billed for map and database search and staff scientist review. Please forward this invoice to your Accounts Payable Department. Thank you for consulting us on this matter, and for your interest in preserving Minnesota's rare natural resources.

Sincerely,



Sarah D. Hoffmann

Endangered Species Environmental Review Coordinator

encl: Database search results

Rare Feature Database Print-Outs: An Explanation of Fields

Invoice

GW, LLC WIND TURBINE PROJECT
T106N R17W SEC. 9,10,15,16,22 & 27, DODGE COUNTY
MnDNR, Natural Heritage and Nongame Research Program

Minnesota Natural Heritage Database
Element Occurrence Records

| TWP | RNG | PRIMARY SECTION | FED STATUS | MN STATUS | S RANK | ELEMENT and OCCURRENCE NUMBER | MANAGED AREA |
|-------|------|-----------------|------------|-----------|--------|--|--------------|
| T106N | R17W | 09 | | SPC | | ERYNGIUM YUCCIFOLIUM (RATTLESNAKE-MASTER) #66 | |
| T106N | R17W | 10 | | SPC | | ERYNGIUM YUCCIFOLIUM (RATTLESNAKE-MASTER) #26 | |
| T106N | R17W | 14 | | THR | | ASCLEPIAS SULLIVANTII (SULLIVANT'S MILKWEED) #78 | |
| T106N | R17W | 21 | | THR | | ASCLEPIAS SULLIVANTII (SULLIVANT'S MILKWEED) #16 | |

RECORDS PRINTED = 4

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